

CLAIM AMENDMENT

17. (Currently amended) An isolated enzyme comprising an amino acid sequence which is at least 70% identical to any one of SEQ ID NOS: 25-32 when aligned using the BLAST~~PN~~ program of the National Center for Biotechnology Information, wherein the enzyme has transaminase or aminotransferase activity.

F¹ 18. (Currently amended) A method for transferring an amino group from an amino acid to an α -keto acid comprising:
contacting an amino acid in the presence of an α -keto acid with an isolated enzyme selected from the group consisting of an enzyme ~~encoded by~~ that has an amino acid sequence which is at least 70% identical to any one of SEQ ID NOSE: 25-32 when aligned using the BLAST~~PN~~ program of the National Center for Biotechnology Information wherein the enzyme has transaminase or aminotransferase activity; and
thereby transferring an amino group from the amino acid to the α -keto acid.

19. (Currently amended) ~~An~~ The enzyme of claim 17, wherein the amino acid sequence of the isolated enzyme is at least 80% identical.

F² 20. (Currently amended) ~~An~~ The enzyme of claim 17, wherein the amino acid sequence of the isolated enzyme is at least 90% identical.

21. (Currently amended) ~~An~~ The enzyme of claim 17, wherein the amino acid sequence of the isolated enzyme is at least 95% identical.

22. (Currently amended) ~~An~~ The enzyme of claim 21, wherein the isolated enzyme is microbial.

23. (Previously amended) The method of claim 18, wherein the amino acid sequence of the isolated enzyme is at least 80% identical.

24. (Previously amended) The method of claim 18, wherein the amino acid sequence of the isolated enzyme is at least 90% identical.

25. (Previously amended) The method of claim 18, wherein the amino acid sequence of the isolated enzyme is at least 95% identical.

26. (Previously amended) The method of claim 25, wherein the isolated enzyme is microbial.

27. (Previously amended) The method of claim 25, wherein the isolated enzyme converts about 400 μ moles of α -keto acid per minute per mg of the enzyme. p22

F3 28. (Currently amended) The isolated enzyme of claim 17, wherein the amino acid sequence of the isolated enzyme ~~has the same group acceptor and amino group donor specificity as the enzyme to which it is at least 70% identical to SEQ ID NO:25~~ and the enzyme has aspartate transaminase A activity.

29. (Currently amended) The method of claim 18, wherein the amino acid sequence of the isolated enzyme ~~has the same amino group acceptor and amino group donor specificity as the enzyme to which it is at least 70% identical to SEQ ID NO:25~~ and the enzyme has aspartate transaminase A activity.

F4 30. (New) The isolated enzyme of claim 17, wherein the amino acid sequence of the isolated enzyme is at least 70% identical to SEQ ID NO:26 and the enzyme has aspartate aminotransferase B activity. ✓

31. (New) The isolated enzyme of claim 17, wherein the amino acid sequence of the isolated enzyme is at least 70% identical to SEQ ID NO:27 and the enzyme has adenosyl-8-amino-7-oxononanoate aminotransferase activity.

32. (New) The isolated enzyme of claim 17, wherein the amino acid sequence of the isolated enzyme is at least 70% identical to SEQ ID NO:28 and the enzyme has acetylornithine aminotransferase activity.

F4
cont.
33. (New) The isolated enzyme of claim 17, wherein the amino acid sequence of the isolated enzyme is at least 70% identical to SEQ ID NO:29 and the enzyme has aspartate aminotransferase activity.

34. (New) The isolated enzyme of claim 17, wherein the amino acid sequence of the isolated enzyme is at least 70% identical to SEQ ID NO:30 and the enzyme has glucosamine:fructose-6-phosphate aminotransferase activity.

35. (New) The isolated enzyme of claim 17, wherein the amino acid sequence of the isolated enzyme is at least 70% identical to SEQ ID NO:31 and the enzyme has histidinol-phosphate aminotransferase activity.

36. (New) The isolated enzyme of claim 17, wherein the amino acid sequence of the isolated enzyme is at least 70% identical to SEQ ID NO:32 and the enzyme has branched chain aminotransferase activity.

37. (New) The method of claim 18, wherein the amino acid sequence of the isolated enzyme is at least 70% identical to SEQ ID NO:26 and the enzyme has aspartate aminotransferase B activity.

38. (New) The method of claim 18, wherein the amino acid sequence of the isolated enzyme is at least 70% identical to SEQ ID NO:27 and the enzyme has adenosyl-8-amino-7-oxononanoate aminotransferase activity.

39. (New) The method of claim 18, wherein the amino acid sequence of the isolated enzyme is at least 70% identical to SEQ ID NO:28 and the enzyme has acetylornithine aminotransferase activity.

F4
cont.
40. (New) The method of claim 18, wherein the amino acid sequence of the isolated enzyme is at least 70% identical to SEQ ID NO:29 and the enzyme has aspartate aminotransferase activity.

41. (New) The method of claim 18, wherein the amino acid sequence of the isolated enzyme is at least 70% identical to SEQ ID NO:30 and the enzyme has glucosamine:fructose-6-phosphate aminotransferase activity.

42. (New) The method of claim 18, wherein the amino acid sequence of the isolated enzyme is at least 70% identical to SEQ ID NO:31 and the enzyme has histidinol-phosphate aminotransferase activity.

43. (New) The method of claim 18, wherein the amino acid sequence of the isolated enzyme is at least 70% identical to SEQ ID NO:32 and the enzyme has branched chain aminotransferase activity.
